

## MEMORANDUM

To: Vermont Children's Performance Indicator Project Advisory Group

From: John Pandiani  
Lisa Gauvin  
Brad James

Date: August 7, 1997

Re: Total Inpatient Behavioral Health Care Utilization by Vermont Children, 1990-1995

The attached report presents data on the utilization of inpatient behavioral health care by Vermont children and adolescents for the period 1990 through 1995. Utilization is viewed in terms of average daily census, average length of stay, the number of hospitalization episodes, and probabilistic estimates of the number of children and adolescents served. Next week, we will distribute data on children and adolescents receiving one service event in a given year.

Please contact us with any suggestions or comments you may have. We will share them with the rest of the Advisory Group. We look forward to your comments on the quality of the data, the appropriateness of the analysis, and the effectiveness of the data presentation as well as your interpretation of the results.

## **Total Inpatient Behavioral Health Care Utilization by Vermont Children and Adolescents, 1990 - 1995**

**Question:** Has total inpatient behavioral health care by children and adolescents in Vermont changed during 1990 through 1995?

**Data:** Inpatient behavioral health care utilization was examined by using extracts from the Health Department Hospital Discharge Data Set, the Brattleboro Retreat Client Database, and the Vermont State Hospital's Admission and Discharge Database. Together these data sets include records for all episodes of psychiatric and substance abuse hospitalizations for Vermont children and adolescents occurring at VSH, Brattleboro Retreat and in general hospitals in Vermont and New Hampshire.

The State of Vermont does not have unique client identifiers across service providers. In order to derive unduplicated counts of the number of people served, Probabilistic Population Estimation has been used to provide both people estimates and 95% confidence intervals.

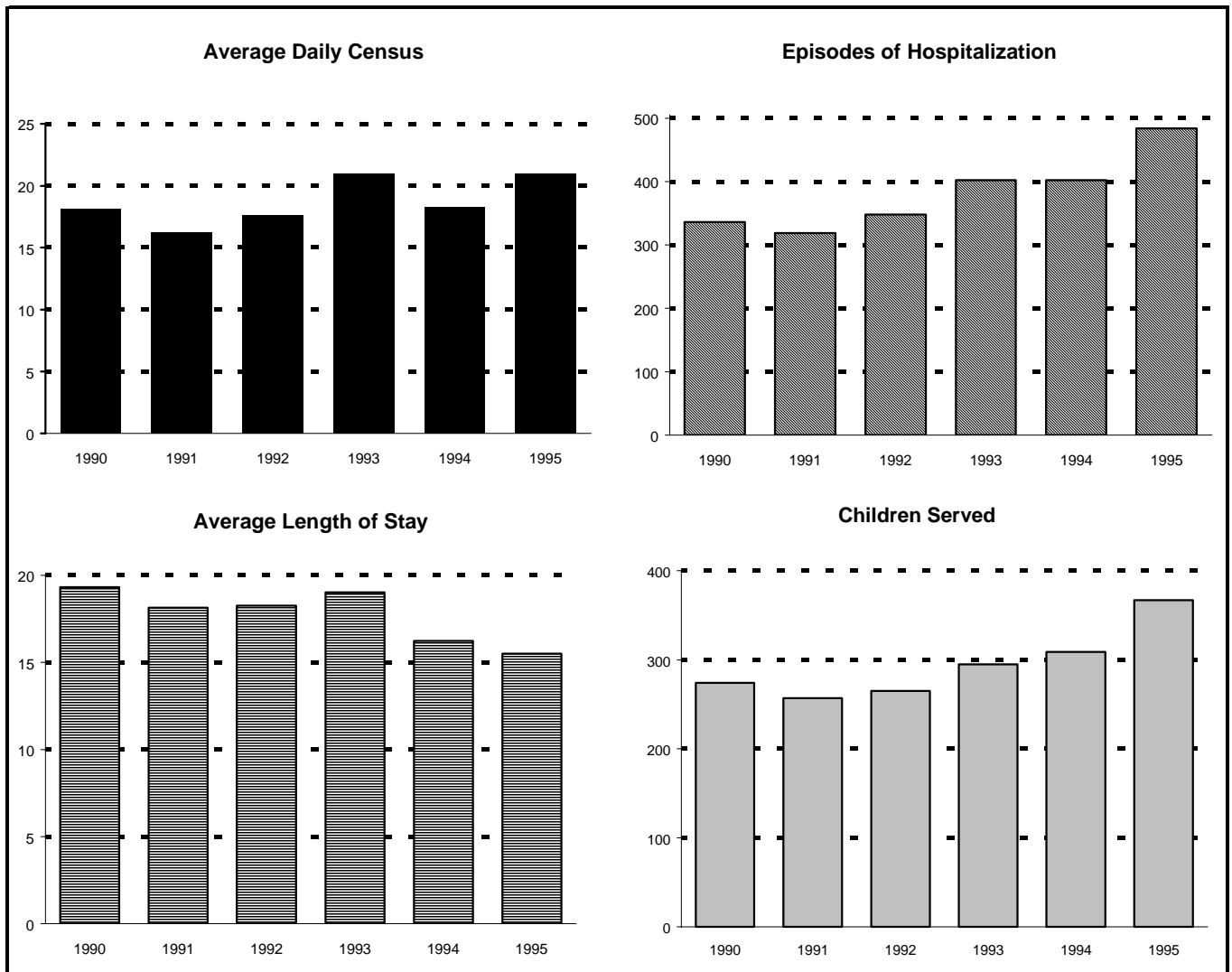
**Analysis:** The analysis reported here looks at utilization in four separate ways. Average daily census (ADC) is the average number of children and adolescents hospitalized each day for each of the six years. ADC is calculated by dividing the total number of patient days used in each year by the number of days in the year. The average length of stay is calculated by dividing the total number of patient days by the total number of episodes. Episodes are the actual number of behavioral health care hospitalizations provided to Vermont children and adolescents during 1990 through 1995. Probabilistic estimates of the number of children and adolescents served (with 95% confidence limits) are reported for each year.

**Results:** Inpatient behavioral health care utilization by Vermont children changed significantly during 1990 – 1995.

- The number of episodes of hospitalization increased by 44% (from 336 in 1990 to 484 in 1995).
- The number of children and adolescents hospitalized during this six year period increased by 34% (from 274 in 1990 to 367 in 1995).
- The average daily census of children and adolescents who were hospitalized for behavioral health care increased only slightly during 1990 – 1995 (from 18 to 21).
- The average length of stay per hospitalization decreased by 16% during this same time period from 19 in 1990 to 16 in 1995

**Next Questions:** Are there differences in utilization of inpatient behavioral health care among the geographical regions of Vermont? Has utilization of different types of facilities changed at different rates? Will utilization of inpatient behavioral health care services change with the introduction of Managed Care?

## Inpatient Behavioral Health Care Provided to Vermont Children 1990 – 1995



	1990	1991	1992	1993	1994	1995
<b>Average Daily Census</b>	18	16	18	21	18	21
<b>Episodes</b>	336	319	348	402	402	484
<b>Average Length of Stay</b>	19	18	18	19	16	16
<b>Children Served</b>	274 ± 5	257 ± 5	265 ± 5	295 ± 5	309 ± 5	367 ± 6

Information is derived from the Hospital Discharge Data Set maintained by the Vermont Health Department, database extracts provided by the Brattleboro Retreat, and Vermont State Hospital Client Database maintained by the Vermont Department of Developmental and Mental Health Services. Information includes all inpatient behavioral health hospitalizations to Vermont residents in Vermont and New Hampshire general hospitals, the Brattleboro Retreat and the Vermont State Hospital.

Vermont children include all residents age 21 and younger.

The State of Vermont does not have a unique client identifiers across service providers. In order to derive unduplicated estimates of the number of people served, the Probabilistic Population Estimator has been used to provide both people estimates and 95% confidence limits.